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NAS KEY WEST
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STATEMENT OF BASIS FOR FORMER FIRE FIGHTING TRAINING AREA SOLID WASTE MANAGEMENT UNIT 3 NAS KEY WEST FL

7/12/1998

U S EPA REGION IV

STATEMENT OF BASIS

Naval Air Station
Key West, Florida

Facility/Unit Type: Military Installation/Former Fire-Fighting Training Area (SWMU 3)
Contaminants: Organics, Metals, and Pesticides
Media: Soil, Sediment, Surface Water, Groundwater, and Biota
Remedy: No Action with Land Use Controls

INTRODUCTION

The United States Environmental Protection Agency (EPA) issued the Hazardous and Solid Waste Amendments (HSWA) Corrective Action portion of the Resource Conservation and Recovery Act (RCRA) Permit (hereafter referred to as the "HSWA permit") to Naval Air Station Key West, Florida (NAS Key West) pursuant to Section 3004 (u) and 3004 (v) of RCRA. The permit was issued on July 31, 1990 and required NAS Key West to complete a further investigation to determine the nature and extent of contamination from a Solid Waste Management Unit (SWMU), the Former Fire-Fighting Training Area known as SWMU 3.

The purpose of this Statement of Basis is several-fold. The Statement of Basis identifies the proposed remedy for SWMU 3 at NAS Key West and explains the rationale for the preference; solicits public review and comment on conclusions of the RCRA Facility Investigation (RFI); and provides information as to how the public can be involved in the remedy selection process. The Statement of Basis provides a summary of past work at SWMU 3 at NAS Key West. This document provides key highlights of the RFI, but should not be used as a substitute for that document. Additional details regarding the facility and the investigation conducted may be found in the RFI Report that is kept as part of the administrative record and the information repository. Refer to the Public Participation section for their location.

The public is encouraged to comment on the proposed remedy based on the conclusions of the RFI Report. EPA emphasizes that the proposed remedy is the initial recommendation of the Agency. Changes to the proposed remedy, or a change from the proposed remedy to another remedy, may be made if public comments or additional data indicate that such a change would result in a more appropriate solution.

PROPOSED REMEDY

As discussed above, the proposed remedy represents EPA's initial recommendation for SWMU 3. The proposed remedy is no remedial action beyond that done in the Interim Remedial Action (IRA) because the contamination at the site has been sufficiently remediated by the IRA. Land use controls will be required. There is no cost associated with the no remedial action remedy.

FACILITY BACKGROUND

The U.S. Navy owns 4,670 acres on Boca Chica Key in Monroe County, Florida as part of NAS Key West. Currently, Boca Chica Key is the location of an active military airstrip and the facilities that support the airstrip. Adjacent properties are zoned for residential use.

In 1988, a RCRA Facility Assessment (RFA) was conducted at NAS Key West. Based on the results of the RFA, an RFI was recommended at SWMU 3, the Former Fire-Fighting Training Area.

The Former Fire-Fighting Training Area is located on the eastern portion of Boca Chica Key, (Figure 1). The area is west of a closed taxiway, approximately 700 feet southwest of Building A1005 (Figure 2). The unit contains vehicles and aircraft that were ignited with JP-5 fuel, waste oil, or hydraulic fluid for use in fire-fighting training. Until recently, two unlined circular pits approximately 20 feet in diameter and 2 to 3 feet deep, surrounded by gravel aprons, existed at SWMU 3. These pits received combustible liquids that were ignited.

Sampling was performed in 1986, 1990, 1993, 1995, and 1996 during a series of remedial investigations at the site. Volatile and semivolatile organic compounds (VOCs and SVOCs), pesticides, and polychlorinated biphenyls (PCBs) were not detected in soil in excess of applicable or relevant and appropriate requirements and screening action levels (ARAR/SALs). Arsenic and chromium were consistently detected in surface soil above ARARs/SALs during the 1995 IRA confirmation sampling on the perimeter of the southern training pit. Sediment sampled from the lagoon to the west and south of the two pits had cis-1,2-dichloroethene, bis(2-ethylhexyl)phthalate, carbon disulfide, arsenic, cadmium, copper, cyanide, lead, and mercury concentrations that exceeded ARAR/SAL levels.

Limited contamination was found in surface water and groundwater samples. As in soil and sediment, inorganics (i.e., antimony, thallium, copper, cyanide, lead, and tin) were the most common class of contaminants detected in surface water. Groundwater sample results indicated levels of VOCs and SVOCs above ARAR/SALs levels during the 1990 and 1993 investigations; however, only one VOC (ethylbenzene) and one SVOC (naphthalene) were detected during the last sampling event.

In October 1995, the soil base and berms associated with the southern burn pit were excavated to bedrock and replaced with clean fill material as part of an IRA based on the earlier remedial investigations. This IRA was performed to prevent migration of contaminants from the fire-fighting training area (both oils and other fuels applied to the pit and burned, and media used to extinguish the fires) into the lagoon and uncontaminated soils. Approximately 726 cubic yards of contaminated soil were removed from the pit to a depth between 20 and 35 inches and properly disposed of offsite. The excavation was

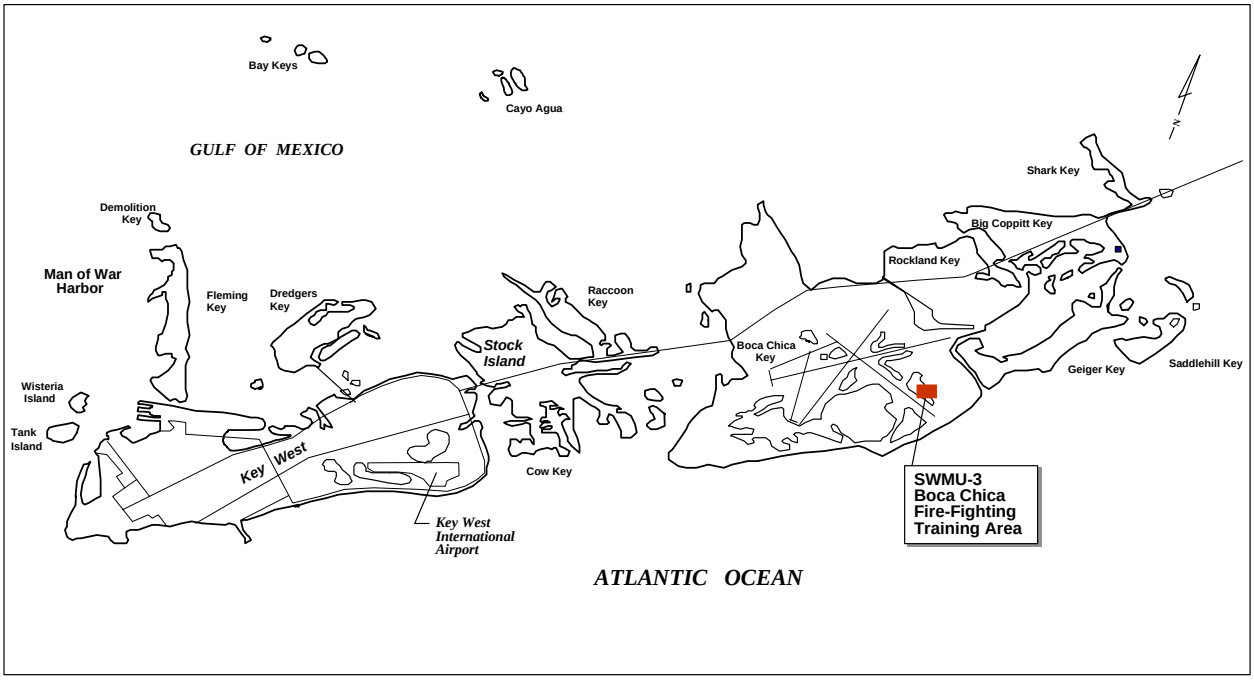

Figure 1. NAS Key West SWMU 3 Former Firefighting Training Area.

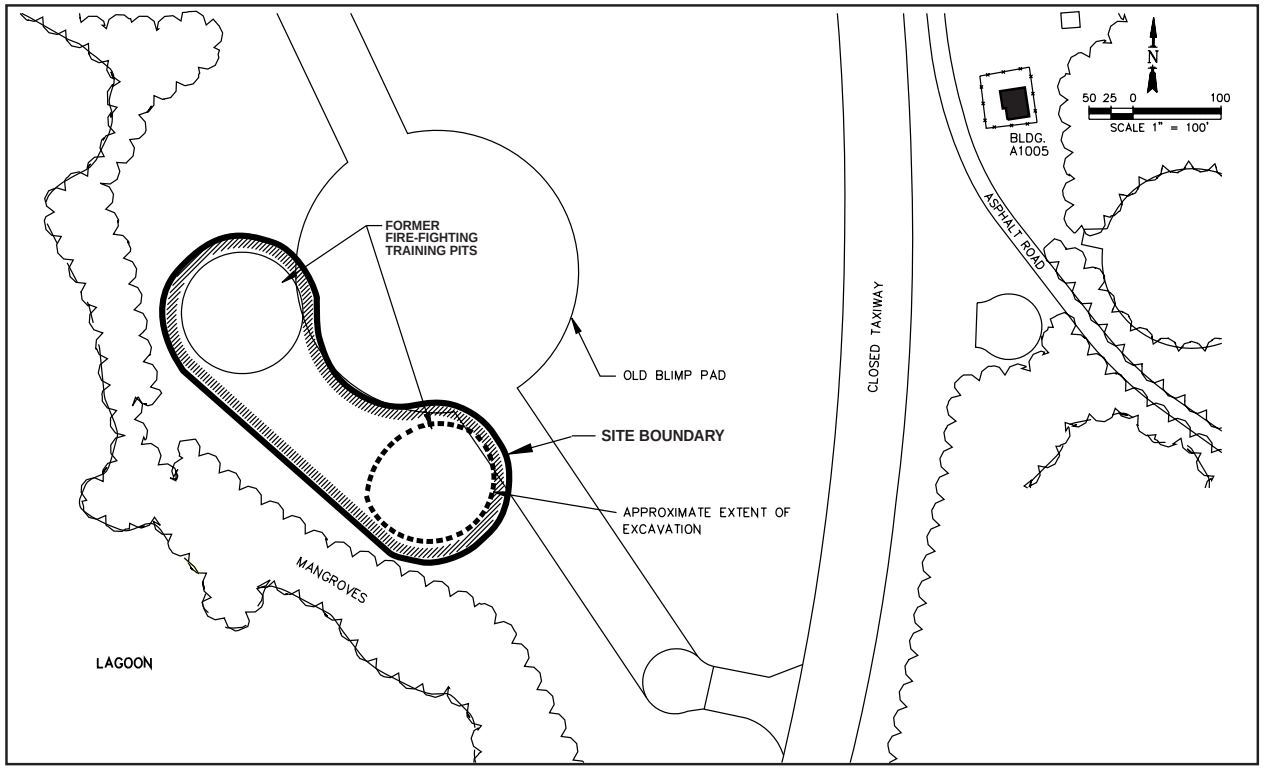

Figure 2. Site Location Map of SWMU 3.

backfilled with crushed limestone to match the surrounding grade.

As a result of the IRA, contaminant concentrations were lower in samples taken in 1996 than in previous years' samples.

SUMMARY OF FACILITY RISKS

A Human Health Baseline Risk Assessment (BRA) and an Ecological Risk Assessment (ERA) were performed as part of the RFI report. The risk assessments for the RFI/RI activities at NAS Key West were conducted in accordance with guidance under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The RCRA sites at NAS Key West were evaluated for risk following CERCLA guidance at the request of EPA Region IV.

In the BRA, human health risks associated with the exposure to detected contaminants in soil, sediment, and surface water were estimated for each potential receptor. Although groundwater was sampled and analyzed, it was not considered a pathway of concern since groundwater at this site meets the Florida Department of Environmental Protection (FDEP) criteria for a Class G-III nonpotable aquifer.

The potential receptors were based on current and future land uses. The current potential receptors identified for SWMU 3 include adolescent/adult trespasser, occupational worker, and site maintenance worker. Under the future land use scenario, the most likely potential receptor is believed to be an excavation worker. Also considered under the future land use scenario are a residential child and adult, although residential development of SWMU 3 is considered unlikely. Under the master plan for land use on NAS Key West, the future land use for the area where SWMU 3 is located is as a restricted-access military base, with future zoning to limit access at the site because it is near an active airstrip. In addition, a memorandum of agreement (MOA) for land use control will be developed and signed by the FDEP, EPA and the Navy. The full BRA is in the Supplemental RFI/RI Report.

The contaminants of potential concern (COPCs) were selected within a medium based on comparison of the detected concentrations to risk-based screening levels. The selected COPCs represent those chemicals at SWMU 3 that are expected to contribute significantly to one or more of the exposure pathways selected for risk estimation. The BRA did not identify any COPCs in soil, so no further action is required to protect human health via this pathway. Arsenic, iron, lead, and antimony were identified in surface water and sediment as COPCs for the current adolescent and adult trespasser and potential future residents. There is potential for a future resident to be exposed to concentrations of contaminants that may cause limited carcinogenic and noncarcinogenic risks. Since there was potential risk, the risk was modeled for potential human receptors. Conservative risk-based screening level values are used in the exposure pathway model for sediment and surface water. This results in the selection of COPCs that do not contribute significantly to the quantitative risk.

For the BRA, the carcinogenic and noncarcinogenic risks associated with detected contaminants are considered negligible. Further, both types of risk are calculated for receptors, who, in all probability, will never be present at the unit. The land use for that part of NAS Key West does not include residential use in the foreseeable future, and access is restricted because it is part of a military installation and adjacent to the airstrip. The SWMU 3 BRA identified three risk scenarios exceeding the one in one million cancer threshold (i.e., 1×10^{-6}). The principal constituent contributing to the cancer risks is arsenic in sediment. However, the uncertainty analysis indicates that the estimate of the cancer risk associated with arsenic for the three receptors (current adolescent or adult trespasser, future resident) is very conservative. The BRA also identified a single noncarcinogenic risk scenario for the future resident exceeding the hazard index threshold of 1.0 with a value of 1.2. The principal constituents contributing to the noncarcinogenic risk are antimony and thallium in surface water.

The ERA was conducted to evaluate the possibility that aquatic or terrestrial ecological receptors may be at risk from site-related contaminants. The ERA was based on laboratory analyses of groundwater, surface water, sediment, and soil samples; sediment and surface water toxicity tests; and laboratory analyses of fish collected from the nearby lagoon. Risks in all media did not appear to pose significant risks to plants or animals. Toxicity tests for surface water and sediment indicated that potential risk to aquatic receptors from sediment and surface water contaminants are negligible. The ERA concluded that potential risk to terrestrial and aquatic receptors at SWMU 3 is negligible.

The proposed remedy for SWMU 3 is no action. The previous soil removal activities at SWMU 3 eliminated the need for additional remedial action. No action with land use controls will therefore be protective of human health and the environment at SWMU 3. There are no costs associated with the no action remedial remedy.

SCOPE OF THE CORRECTIVE ACTION

EPA considers that HSWA Corrective Action has various options for implementing remedies based on site conditions. For SWMU 3 at NAS Key West, the RFI Report indicates that the IRA performed at the site reduced the threat to human health and the environment to acceptable levels in accordance with the NAS Key West HSWA permit. Therefore, there is sufficient justification to propose a no action remedy for the site with land use controls.

PUBLIC PARTICIPATION

To make a final decision and incorporate a remedy into the RCRA permit, EPA is soliciting public review and comment on this Statement of Basis for the proposed remedy to SWMU 3 at NAS Key West. The regulations under 40 CFR 270.42(c)(2) require a 60-day comment period for a permit modification request made by the permittee under RCRA. EPA has undertaken the lead role on this request initiated by the U.S. Navy (the permittee). The comment period will begin on Sunday, July 12, 1998, which is the date of publication of the public notice in *The Citizen* newspaper, and will end on Saturday, September 12, 1998.

The Statement of Basis and the associated administrative file, including the RFI Report, may be viewed and copied at the EPA Regional Office in Atlanta, Georgia between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, except legal holidays. Additional copies of the RFI Report and Statement of Basis

will be available for public review at the information repository in the Local and State History Department at the Monroe County Library, 700 Fleming Street, Key West, Florida (Phone 305-292-3595).

Further, EPA has determined there is sufficient need to hold a public meeting. It will occur at 7:00 p.m. on Monday, July 27, 1998, at the Holiday Inn Beachside, N. Roosevelt Blvd., Key West, Florida. Please call Phillip Williams at 305-293-2061 for directions to the public meeting. At the meeting, the proposed remedy will be discussed and questions will be answered. The public meeting will also address the proposed remedies for SWMUs 1, 2, and 4. To request information about the public meeting or comment period, to obtain more information concerning this Statement of Basis, or to submit written comments contact: Martha Berry, Remedial Project Manager, U.S. Environmental Protection Agency, 61 Forsyth Street, SW, Atlanta, GA 30303-3104 (Phone: 404-562-8533; Fax: 404-562-8518). All comments must be postmarked by Saturday, September 12, 1998.

NEXT STEPS

Following the 60-day public comment period, EPA will issue a final decision on the RCRA permit modification request. The RCRA permit modification will detail the remedy chosen for SWMU 3 and will include responses to oral and written comments received during the public comment period in the Responsiveness Summary. Upon receipt of all of the Statement of Basis documents for NAS Key West SWMUs (SWMUs 1, 2, 3, 4, 5, 7, and 9), EPA will develop and issue the draft permit modification.

When the EPA makes a final decision to modify the permit, notice will be given to the Navy and each person who has submitted written comments or requested notice of the final decision. The final permit decision shall become effective 30 days after the service of notice of the decision unless a later date is specified or review is requested under 40 CFR 124.19. If no comments are received requesting a change in the draft permit, the final permit modification shall become effective immediately upon issuance.

CONTACT PERSON

EPA

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STATEMENT OF BASIS
Former Fire-Fighting Training Area (SWMU 3)
Naval Air Station
Key West, Florida

Your comments on the SWMU 3 proposed remedy:

Does this statement of bases provide adequate information regarding the proposed remedy at SWMU 3?

☐ Yes ☐ No

If not, what other information would you like? Do you have any other comments on the actions taking place?

If you have additional comments include on separate page. Note the statement of basis you are commenting on.

If you received this statement of basis in the mail, you are on the mailing list. If you did not receive this newsletter in the mail but would like to be included on the mailing list, please complete the following:

Name _____

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Fold this page in half so that the address on the back is visible, staple or tape closed, stamp, and mail.

Comments on Statement of Basis
Former Fire-Fighting Training Area (SWMU 3)

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Martha Berry
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